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N. E. FARMER.

We devote a large portion of our paper this week, to the following valuable article from the Hon. William Clark, Jr., of Northampton. Mr Clark's experience as an agriculturist, and his success in the department of agriculture upon which he treats, entitle his essay to a careful perusal.—We should be happy to receive an account of the experiments alluded to in the closing paragraph.

RENOVATION OF EXHAUSTED SOILS.

Mr Putnam—The importance of some efficient and more economical method of renovating exhausted lands, than any now commonly pursued, is more deeply felt as the need of a more successful and productive agriculture is better appreciated.

It is true that much has been done by means of "improved husbandry," to arrest the desolating march of the scourging system of former days, which at one time bid fair eventually to depopulate the older settled parts of our country. Yet, judging from the past, it is also true that there are now more fields to be won to former fertility, than ordinary methods of fertilizing will accomplish in perhaps a century to come. Tracts of exhausted or worn out land are found in almost every section where "pine plains" or sandy lands exist. Many fields of this have been thrown out of cultivation, and are considered nearly worthless. Others, by scanty crops, now impoverish those who work them, or return a bare compensation for the labor applied; while some, from peculiar location, or other circumstances favorable to their improvement, have become productive and valuable. Cases enough of the latter class exist to show beyond a doubt that these lands are capable of being made highly productive; and after being put in good condition, it is thought by some that if well managed, few other lands will give a better return for the labor and expense bestowed in their cultivation.

As a general remark, it may be said of these exhausted lands that they are light, dry, and easy of cultivation, and possess all the constituents of a good soil, *except food for plants.* This exception is a most important one; but of this the land has been in a great measure deprived by severe cropping or cultivation, invited to excess by the easy and generous nature of the soil; and the question ever presented to the owner, or the passer by even, is, *How can this most essential element of fertility* (food for plants) *be profitably and economically restored to this wasted soil?*

A moment's reflection would seem enough to show that ordinary means fall far short of meeting the whole case. The extent of these lands—their location, often distant from the dwellings of owners—and the expense of labor and material, if manure is to be hauled, have a bearing, as regards both practicability and economy. And farm-yard manure, which affords the principal, of means generally employed to fertilize, is very limited in quantity, and together with the various animal substances used for the same purpose, affords less than is desirable for those lands which are now in a state of improvement, necessarily leaving exhausted fields to remain exhausted, unless successful resort is had to some other equal or superior method of fertilizing, as a substitute.

In looking for this substitute, various inquiries present themselves, naturally leading to the investigation of first principles, to seek out the cause of fertility and its sources, or to learn what is food for plants, what its nature or qualities, and where and how it can be obtained.

To assist in this investigation, Geology and Chemistry have disclosed facts no less valuable than those obtained by farmers from experience and observation. Geology teaches that there was a period in the history of our earth, when vegetation or vegetable matter was unknown; and we therefore infer that the plants or vegetables first brought into existence, must of necessity have subsisted solely upon elements found in water, atmospheric air, and the rock formations of the earth. In support of this inference, chemistry tells us that upon analysis, *all* the elements of vegetable matter are found to exist in water, air, and the rock formations. This is perhaps sufficient evidence as to what are the original sources of fertility or food for plants.

Geology shows further, as the earliest coal formations clearly indicate, that the first vegetable products of the earth were lichens, mosses, and other inferior plants, none of them capable of producing seeds or fruits suitable for the sustenance of men or animals. And no traces of the more valuable plants are found, except where preceding generations of the inferior orders had crumbled to decay and their remains mingled with the primitive earths or decomposed rocks, had formed what is commonly termed a productive soil.

From this we might infer that *the elements of fertility existing in a primitive state,* were competent to the growth and perfection of inferior plants, but were so diluted or attenuated, as to be incompetent to the perfection of the more valuable plants; and further, that the inferior plants when gathering nourishment from its primitive sources for their own subsistence, were in fact concentrating and condensing food for the benefit of their successors; and when decomposed, went to the formation of a soil, and themselves became food for succeeding plants; and by presenting food in a more condensed form than in its primitive state, gave sufficient nourishment for the perfection of plants of a higher order—the latter of course exhausting the soil of nutrition precisely in proportion to the amount which they drew of the remains of the former from the soil.

In support of these inferences, it is a well known fact that mosses and some other plants of equal merit, do flourish in situations where their organs can have access apparently to little or nothing but the primitive elements. And modern experiments have repeatedly shown that seeds of grain planted in pure sand or pounded glass, and supplied only with air and light, and distilled or pure water of suitable temperature, will grow up to the time of flowering; but after that period, literally die of starvation, and do not perfect their seeds, evidently for want of more substantial and abundant sustenance than is requisite in the first stages of growth, or than the organs of the plants can gather from a state of primitive diffusion for the last stages of growth or perfection of the plants. Here is evidence that the primitive elements now possess what we have supposed to be their primitive powers, and evidence also that all plants draw a portion at least of their early nourishment from its primitive sources. The fact that plants require more food, and make heavier drafts upon the soil when ripening their seeds—and of course exhaust the soil more—than during previous growth, is well illustrated by the broom corn plant. This plant gives the most luxuriant farm crop grown in New England. Its weight of stem and foliage is perhaps double the weight of stem and foliage of Indian corn on land of same extent and quality, and from its ponderous growth might be expected to exhaust the soil more than any other crop; and yet it is said by many of long experience with it, to exhaust less than almost any other. The obvious reason for this result is, that from the effect of early frosts, a *full* crop of seed is not obtained oftener than an average of perhaps once in four or six years—the principal object of the grower being the "brush" and not the seed of the plant. But where a full crop of seed is obtained, the exhaustion—making due allowance for the large return to the soil of stocks and leaves of the plant left at harvest, is thought equal to that of other crops.

Experience has further shown that where the chemist can find no vegetable matter in the composition of a soil, the farmer can obtain no valuable product. And every farmer who cultivates in corn an acre of sward land of light quality, and observes the difference in crop between where a good sward was well plowed under, and where there was little or no sward when plowed, sees full evidence that decomposed vegetable matter is food for plants.

The universal practice among good farmers, on lands long cultivated, of saving weeds, brakes, refuse hay or straw and like substances, to go through the cattle yard or compost heap to the plow-field, which observation and experience has always approved, is evidence to the same point, as is also *universal experience* where new lands with ages of accumulated vegetable matter, are brought under cultivation, and can hardly leave a doubt in any mind that decomposing vegetable matter affords the *essential food* that in any soil is necessary to the *perfect* developement of grain-producing and fruit-bearing plants, or plants of the highest order in the scale of vegetable excellence.

This essential food for plants has been called *geine.* This term is not very familiar to farmers, but is nevertheless useful as a definite name for the solid aliment of plants, existing in the soil or at the earth's surface, distinct from the gaseous aliment which the atmosphere affords to plants in all places, and also distinct from the primitive earths or salts which enter into the frame-work of plants for their mechanical support, or which seasons their food or incites their organs to greater activity

in appropriating nutrition. Some difference of opinion seems to exist among chemists in relation to geine. One has denied its existence further than its being a developement of carbon; and another has discovered that it is compounded of at least ten different substances, some of which are compounds, and prefers to use the names of its constituents as far as they are known—crenic and apocrenic acid, &c.—leaving the remainder in "an unknown" and undenominated state. This may be all well for mere theorists; but as it proposes no change of measures to the practical man, in regard to the use, or affecting the value of the substance itself, it offers no inducement as an equivalent for rendering the subject more complex and obscure, by a formidable array of technical terms, of which time alone it seems will develope the full number.

It is highly desirable that this matter should be divested of all unnecessary drapery, and left as simple and plain as may be, to insure clear views and correct practice; for the practical farmer has but little interest in the support of mere theory, and is likely to be more bewildered than benefited by "wondrous technicalities," and however proper it may be to "call things by their right names," he will doubtless prefer to use the simple term *geine*, until it is shown to lead to error in practice, or some practical benefit is promised by the change; for the same reason that he will prefer to call a certain kind of grain, *wheat*, rather than attempt to designate it by naming its components—starch, gluten, &c.—merely because these substances happen to exist in the different varieties in ever varying proportions.

Dr. S. L. Dana, of Lowell, whose incidental researches in agricultural chemistry are resulting in the highest benefit to the State, by advancing the science of agriculture, has rendered invaluable service by his discoveries relative to the nature and qualities of geine. His definition of it includes all decomposed organic matter, or all decomposed substances that have once possessed either vegetable or animal life.

In speaking of geine in connection with the earthy constituents and soluble salts of soils, he says: "the earths are the plates, the salts the seasoning, the geine the food of plants;" and describes geine as being a brownish black powdery mass, the result or product of the putrefaction or decomposition of organic substances, "existing in two states, soluble and insoluble: soluble geine is the food of plants; insoluble geine becomes food by air and moisture." "Geine forms the basis of all the nourishing part of all vegetable manures." "It is the principle which gives fertility to soils:" "it absorbs and retains nearly its own weight of water without seeming moist;" and "continually subjected to air and moisture, it is finally wholly dissipated in air, leaving only the inorganic bases of the plant with which it was once combined."

It has long been a conceded point, that the production of a plant is not a new creation, but merely a new arrangement or new combination of pre-existing particles of matter. But the changes which this matter undergoes previous to these new combinations, and after they are broken up, have been mostly unknown until the discoveries of Dr. Dana have supplied those links in the chain of evidence which were necessary to trace in connexion its circling history, through its ceaseless round of ceaseless changes.

These discoveries, with the other facts adduced, give evidence that geine comprises all the nutritive food which plants draw from the earth, and is furnished by the decomposition at the earth's surface, of vegetable or animal substances, the elements of which all originated from the primitive sources of fertility existing in air, water, and the rock formations.

Evidence is given also that all plants draw a portion of their subsistence from the primitive sources of fertility, and to the extent that they do this, they are capable of augmenting the quantity of geine in any soil on which they grow, by being covered in the soil, the reservoir which nature has provided to protect from dissipating atmospheric influence, and yield as they demand it, this concentrated or condensed nutrition which is necessary for the perfection of grain-growing and fruit-bearing plants.

Important evidence is given also in regard to the nature of geine, which shows that precisely at the period when it is reduced to a soluble state and prepared to be taken up by the roots of plants, *if exposed to the atmosphere*, it assumes a gaseous form and escapes. That which was of aerial origin—leaving the earthy parts or elaborated salts to mix with and measurably fertilize the earth—returns to the atmosphere and mingles with kindred atoms, to range the etherial expanse with pristine freedom, or fertilize other fields, if perchance it comes within range of the appropriating powers of their growing plants.

If these evidences are correct, it follows that all substances, are valuable as food for plants, in proportion to the amount of geine which they will yield, making due allowance for expense of bringing it to a soluble state; and plants, to be grown as fertilizers, are valuable in proportion to the amount of the elements of geine they gather from the atmosphere during growth; and the exposure of soil, containing soluble geine, to the active influence of midsummer atmosphere (as in the case of deep cultivation among growing crops, or of naked summer fallows,) however necessary it may be for the destruction of weeds or grass, inevitably results in the loss of fertilizing properties.

These facts, duly considered, appear sufficient to direct in the choice of the most economical measures to restore fertility, and the most efficient measures to preserve it.

Having ascertained that geine is the substance requisite to restore fertility to exhausted land, the next point for consideration is to find the most economical method of obtaining it; and this leads to an estimate, as far as may be, of the comparative value and expense of materials producing geine. These are various, including all vegetable and animal substances. Substances purely animal, although possessing intrinsic value perhaps the highest in the scale, and worthy of great consideration where acres or half acres only are concerned, are too limited in quantity to affect materially the whole subject of exhausted lands, and therefore their consideration, as well as that of some other enriching substances, may, in this view of the subject, be omitted.

Farm-yard manure, peat or swamp muck, and the elements of geine, obtained from the atmosphere by the agency of grasses or other plants, to plow under, are generally all within the reach of every owner, and taken together doubtless afford ample means to sustain the fertility of the fertile, and enrich every acre of exhausted, land. The first is limited in quantity to the amount of farm stock kept; the second is generally abundant, and in many places exhaustless; and the principles of the third are coextensive with the atmosphere itself, and for aught that appears, have energy now unimpaired as when, in the beams of the first morning, they were appointed the basis of all future vegetable and animal growth.

It will readily be seen that it is difficult to find the exact relative value of these substances, or the exact expense of obtaining them, as more or less of variation in different cases, may always be found, in both these particulars. An approximation to the truth in the case, as to a general proposition, is therefore all that can be expected, and may be all that correct practice will require; and for this purpose there are facts and data that may perhaps be deemed sufficient.

There is doubtless more generally a fixed or definite idea of the value of farm-yard manure, as a fertilizer, than of any other enriching substance; it may therefore be considered a better type of manures, or standard for comparison, than any other.

Dr. Dana, taking his own analysis in connection with that of others in other places, estimates a ton of green cow-dung to yield three hundred and five pounds of dry solid geine, calling all its hay *insoluble* geine. He says "it rapidly changes to that state: its passage through the animal, like *boiling*, has put it in a state to become geine much sooner than hay would change, if buried in the soil."

Estimating the value of common farm-yard manure at one dollar per ton, and allowing a ton of it to give the same quantity of geine that is given by a ton of solid green cow dung, (few would place it so high,) and geine from this source can be obtained at a fraction less than 33 cts. for 100 lbs.

To ascertain the value of swamp muck, three samples from a small swamp in Northampton, were forwarded to Dr. Dana for analysis. These samples were taken from different depths, to give as near as could be, an average quality of the whole deposite. Samples from other swamps situated from thirty rods to three miles distant from this, were also forwarded, which proved more or less rich in geine, and gave an average quality nearly equal in value to the three samples first mentioned. The average of the three samples, after being drained of water equal to one third of the weight of the muck when first dug, which it will readily do, if piled up a few weeks, gave at the rate of four hundred and thirtyfour pounds of geine to the ton. The cost of digging and piling muck, where it can be thrown up with a shovel or handily run out with a barrow, will not commonly exceed 25 cents per ton, in its half dry state; and allowing the ton to give 434 lbs., will furnish geine in an acid state or mingled with acids, for something less than 6 cents for 100 lbs.

Muck or peat when first dug, is, from its sourness, so unfriendly to vegetation, that it cannot be employed with advantage in any case, except perhaps in small quantities and on a dry soil, unless it be subjected to some process for neutralizing its acidity. To effect this object, various processes have been proposed; all of them however seemingly too expensive; and for a cheap process, which is doubtless attainable, the farmer must yet look to the practical chemist.

In the absence of a better method, take that pursued by Mr Phinney, of Lexington, who, after repeated experiments with compost made of two parts peat mud to one of green stable manure, all well mixed and fermented, says: "A load of this com-

post will give as great a produce and a more permanent improvement to the soil, than the same quantity of stable manure. In this opinion I am not alone. Other accurate and intelligent cultivators have made similar experiments with similar results." Additional testimony, to sustain Mr Phinney's opinion as to these results, might be given, were it necessary; but these results can be true only on the supposition that peat contains as much geine or food for plants as the same quantity of stable manure, as is shown by analysis it does contain.

The peat from Mr Phinney's farm appears not to differ essentially from best samples of swamp muck; and was found on analysis by Dr. C. T. Jackson, of Boston, to contain less silica and more salts and vegetable matter or geine, than the same weight of dried horse dung. Other samples of peat were found by Dr. Jackson to give from one or two to six per cent. less vegetable matter than that from Mr Phinney.

A compost of farm-yard manure and muck, in the same proportions that Mr Phinney employed similar materials, including the labor of compounding, hauling, &c., will afford geine fit for immediate use, at about two thirds the cost of that from the farm yard alone. And further, the quantity and value of fertilizing matter, on many farms, may thus be trebled, without further increase of live stock or cost of material from abroad. This leaves no doubt as to the expediency and economy of calling in the aid of peat and swamp muck to fertilize, rather than to depend exclusively upon the very limited product of the farm yard for that purpose, and is perhaps sufficient evidence as to the intrinsic value of peat and swamp muck, compared with farm yard manure.

A comparison of the expense of obtaining geine from its original sources, by the aid of growing plants, with that of obtaining it from the farm yard, is, in the absence of facts which the practical chemist alone can furnish, more difficult, and should be taken with a liberal allowance.

Mr Phinney says he "ascertained by an accurate experiment, that on the first of May, a single foot of sward land, taken from a field that had been mown for a number of years, and thinly set with redtop and herdsgrass, contained nine ounces of vegetable matter, consisting of the roots and tops of the grasses; giving at this rate over twelve and a quarter tons to the acre."

How much geine a ton of this vegetable matter will yield, is, in the absence of a chemical test, a matter of conjecture. In view, however, of the pains-taking care of good farmers, to collect and save, ounces even, of similar substances to enlarge the manure heap, it seems but reasonable to suppose that it is at least half as valuable as the partly dry swamp muck we have been considering, and if so, the twelve and a quarter tons will give twenty-six hundred and fiftyeight pounds of geine.

The cost of growing this amount of vegetable matter, must of course vary with the varying cost and condition of the land on which it is grown, governed somewhat by the more or less favoring season.

Suppose the value of the land be estimated at ten dollars per acre, which is doubtless more than the average estimated value of our exhausted lands, and allow that an entire *unfed* and *uncut* two years growth of clover, herdsgrass and redtop, on such land, just equals Mr Phinney's "thinly set" redtop and herdsgrass sward, which *had been mown*, and the cost of 2658 lbs. of geine from this source—if the grass seed be sown with some other crop and not chargable with expense of plowing and harrowing—will stand as follows:

Two years' interest on cost of land,	$1 20
Grass seed, average cost, 8 lbs. clover, 80 cents; 8 qts. redtop, 25 cents; 4 qts. herdsgrass 33 cents; and sowing grass seed, 10 cents—	1 48
1-2 bush. plaster, and sowing and rolling, 50 cts. per year, two years,	1 00
Total, - - -	$3 68

Or less than 14 cts. for 100 lbs. The geine furnished by this grass sward is grown where it is wanted—ready carted and spread—for plowing under; and under a dry sandy soil, quickly becomes soluble without further expense.

If no fallacy or error has been admitted in the estimates thus far, the comparative expense of furnishing our exhausted fields with geine from the three sources considered, will stand as follows:

Dressing one acre with twelve and a quarter tons of vegetable matter, consisting of tops and roots of grasses, grown upon the spot, ready carted and spread for plowing under, will cost		$3 68
Dressing one acre with an equal amount of fertilizing matter from a compost of swamp muck and farm yard manure, 6 4-5 tons, at estimated cost of materials,	$3 40	
Cost of composting, overhauling, reloading, carting to field, and spreading, varying with distance of carting—say average 60 cts. per ton,	4 08	
Total,		$7 48
Dressing one acre with an equal amount of fertilizing matter from the farm yard, 8 2-3 tons, at $1 per ton,	$8 67	
Cost of hauling and spreading, varying with distance—average say 40 cts.	3 47	
Total,		$12 14

If these estimates are correct, or nearly so, (and the grounds on which they are based are given,) the farmer who has plenty of peat or swamp muck at hand, can furnish his plants with food, by means of compost, at a little less than two thirds the expense of furnishing the same amount from the cattle yard exclusively; and in addition to this great saving of expense, can three-fold his ordinary supply of food for plants, without increasing the number of his domestic animals, or competition with his less provident neighbor, for a supply from the market abroad; his muck or peat bog is a treasure that duly improved will render him independent of all foreign aid to fertilize; and with the farm yard, will doubtless afford him "poudrette" as good as the best, whenever correct views of true economy shall overcome State parsimony and real waste, so far as to put a chemist in the field to develope this eventually great source of fertility and wealth.

If in the estimated expense of collecting fertility from the atmosphere, sufficient allowance is made for the unknown precise value of the grass roots and tops; a given quantity of geine, from this source can be furnished, to renovate an exhausted field, at about one fourth the expense of the same amount from the cattle yard. Indeed, if the estimate is correct, the cost of hauling and spreading manure and compost, will in some, and perhaps all, cases of land, remote from the farm yard, exceed the cost of growing upon the spot, an equal amount of fertilizing matter. This seems to leave no doubt as to the most economical method of restoring at least a moderate amount of fertility to our exhausted soils, but should by no means induce the neglect to save and use all the manure and compost which a farm can well furnish.

An important question comes up then, as to the most valuable plant to be grown as a fertilizer; and this inquiry can be solved with precision only by the practical chemist. Clover is justly held in high estimation. It has a large array of leaves, and presents a large surface of appropriating organs to the atmosphere, and may or may not be the best plant we have for the purpose of fertilizing. It has, however, obtained the distinction of being called "the mother of wheat," and accounts of the fertilizing effects of clover with other grasses, have been published, which go very far to support the estimated value of Mr Phinney's grass sward.

In view of the known value of peat and swamp muck, which is mainly composed of the remains of plants of inferior character, weeds even, should not be viewed as "pests to the farmer," so long as they do not interfere with his growing crops; but as friends—foragers upon the atmosphere—gathering wealth that will ultimately appear in the heavy sheaf and full garner. Every blade and every leaf, however humble or obscure, and however brief its existence, at death yields to its mother earth a tribute of the elements of fertility, gathered from the atmosphere. This principle of fertility is indestructible as the earth itself, and must be lasting as time.

From the period of its first arrest, by the mysteriously life-endowed springing plant, it seems by a strong principle of affinity, ever to be seeking a reunion with its native elements. This propensity or quality of its nature, which seems wisely ordered to prevent accumulations that otherwise would render the earth uninhabitable, is perfectly controlled by the principle of vitality, and after the death of the plant, by the absence of either air, or moisture, or temperature, that will promote the growth of plants—agents, which first gave it connexion with the living plant, and which now combine their efforts to effect its release, that it may be again arrested to give fresh beauty to earth, or do new service to man, and yet again be liberated, fresh as in the morning of existence, to run its ceaseless round of duty, in obedience to those laws which constantly tend to fertilize, where the labors of man, through ignorance or carelessness, constantly tend to impoverish. This propensity to evaporation or change, accounts for the exhausting effect of summer fallows and deep cultivation among growing crops; and also for the benefit resulting from a level surface on cultivated ground, by presenting less exposure to the exhausting effect of midsummer atmosphere, or for the escape of geine. It gives, indeed, a plain reason for various facts and phenomena, relative to the exhaustion of land, which have become well established by careful observation, after immense loss to farmers, from ignorance of this single principle, a knowledge of which affords a clew to the best means of preserving fertility, by disclosing its mode of escape. And yet, pending the discovery by Dr. Dana, or indeed in the face of it, there are not wanting those called farmers, who doubt if any thing valuable

has recently been, or can be, learned, beneficial to agriculture!

In Dr. Dana's published remarks upon geine, the practical farmer will find much to aid his labors, and will feel much regret that the avocations of the Dr. do not permit him to deal as thoroughly with the "salts" or "seasoning," as he has with the "food" of plants,—a labor equally necessary as the other, and would doubtless accomplish more in a few months to advance the art of production, than can be reasonably expected from a century of merely practical experiments and observation, unaided by the light of science. It is this light that is needed. Indeed, the *feet* that tread the pathless wilderness, or the *hands* that labor at the nicest mechanism, may as well say to the *eyes*, we have no need of *thee*, as the practical farmer say to the chemist, your assistance is unnecessary.

Land may be unproductive from other causes than exhaustion or mere poverty. Water, or substances deleterious to vegetation, or which preserve the geine in an insoluble state, may exist in such quantity in a soil, as to render it sterile. Such lands cannot with propriety be classed with, or termed, exhausted lands. Exhausted lands properly include only such as have once possessed some degree of fertility, and have been reduced by a loss of geine, either drawn out by growing crops, or rendered soluble and scattered to the winds by exposure of the soil to the atmosphere in the process of cultivation. The *fact* that a soil is exhausted, gives evidence that its earthy constituents are *good*, or capable of supplying the elements which plants require of the primitive earths; otherwise it would not have sustained crops or invited cultivation to the point of exhaustion.

As before observed, exhausted lands are generally of those denominated "light lands"—sand predominating in their composition. The lighter qualities are frequently called "pine plains," or "pine barrens." These lands are termed *light*, from their open texture, and their comparative poverty, both in a natural state and where cultivated in a careless manner, is due in a great measure to their poverty. It is this open quality of texture, which admits the combined action of air, heat, and moisture, to resolve into its original elements, the vegetable matter contained in these soils, by the most rapid course of decomposition which nature exhibits; even artificial "sweat pits," to test experiments to prevent the decomposition of timber used in naval architecture, seem to make but one step in advance of the ordinary progress of decomposition near the surface of these lands in some of the summer months. Indeed the well known expedition with which a stake or fence post is "eaten off," may well vie with any artificial method of decomposition, whatever, and sets forth the *digestive power*—if it may be so termed—of these soils, in its true light, as exceedingly active. Without this power in a certain degree, however, a soil is valueless for all the ordinary purposes of cultivation; as on this quality depends the production of soluble geine from those substances applied to the soil as alimentary manures. But if this digestive power is too active, and is not restrained, the materials producing geine are soon wrought up, and their products given to "infiltration" or to the winds, while the incumbent crop is left to suffer some degree of want in the midst of its growth and perhaps starvation at its close, where plenty has been wasted. To regulate this power then, by promoting its action where it is too sluggish, and controlling it where it is too active, may require the best judgment of the farmer; and whether he recognise the principle or not, his success may depend much upon his practice according with it. Clay or hard pan on the one hand, and porous sands on the other, alike require his mechanical skill to render them fertile, or place them on a par with those soils which the revolutions and currents upon the earth's surface, have compounded at a happy distance between those two extremes.

The under-draining and subsoil-plowing of compact and heavy or wet land, confers a double benefit. By sinking the water, and admitting air or atmospheric influence to a greater depth in the soil, its decomposing power is promoted, by which the insoluble geine in the soil is rendered soluble, and a more extended range is also given to the roots of the plants. Under this process, the character of the soil changes, and its products change;—cold land becomes warm—aquatic plants and worthless herbage, give place to useful vegetation—and land even but moderately heavy is much improved. This result is seen where swampy or heavy lands are "thorough drained," and the cause seems directly traceable to the quickening and solutive effect of atmospheric influence, admitted to act upon the roots of the growing plants and the inert vegetable matter, to a good depth beneath the surface.

On the other hand, the roller, on very light and porous lands, effects equal benefits by an opposite process. By compressing the surface, (not to hardness, but giving it more compactness,) the air is in some measure excluded, and the digestive power of the soil is less active, moisture is better retained, and the ready escape of geine as it assumes a gaseous state, prevented—and the fine roots of young grasses, instead of striking into vacancies to grasp at empty space, and be followed and parched up by the first drying winds, find protection from the air, and substance to take hold of which affords moisture and sustenance; and with a favorable season and a New England climate, a fine grass sward easily results. Under this process, the lightest exhausted land, except perhaps a drifting sand hill, can be resuscitated. The character of this soil also seems to change, and its products change. The arid, porous, sunburnt surface becomes comparatively firm and moist; sparse coarse-rooted weeds, nodding over the desolate field, give place to enriching grasses; a lively green succeeds a lifeless brown; where the plow heel left a wave of light crawling sand, it now leaves a dark, glossy, adhesive furrow-slice; and clover and corn luxuriate, where mulleins and johnswort held battle with famine. This result is seen in all cases, on light porous land, where the roller or its equivalent is used, in connexion with a proper supply of vegetable matter plowed under; except perhaps over a gravelly open subsoil, that prevents the subjacent moisture from ascending to supply the plants in time of drought. The cause seems plainly traceable to giving the soil more compactness as a starting point, that it may resist the free admission of air, and free escape of geine and moisture, and give protection and support to young grass plants as a medium to fertility.

The fertility of land is found to depend much upon its power of absorbing and retaining a due degree of moisture, and its power of absorption and retention is promoted in all cases, by enriching the soil or increasing its geine, as, according to Professor Hitchcock, no other earthy substance possesses this power in an equal degree. The more, therefore, there is mingled with a *dry soil*, of *well decomposed* vegetable matter, whether it be from the cattle yard or muck pit, or decayed grass sod, the better the soil will preserve a suitable degree of moisture to sustain growing plants in time of drought; while in a *moist soil*, the increase of geine may cause excess of moisture, and increase the necessity of under-draining. The result from this property of geine, is highly beneficial in the first case, and in some measure supercedes the necessity of mixing clay with a sandy soil to effect the same object; but in the moist soil, is in some degree pernicious, unless the proper remedy be applied.

It is not to be expected that land nearly reduced to sterility can be brought up, and made fertile at once, without extraordinary means. If the process be, to fertilize entirely from the atmosphere, it is a work of time; for the first series of plants will of necessity be feeble in their early growth, and the difficulty of obtaining these, if clover and grass is first attempted, is sometimes increased by the adversity of the season. Under favorable circumstances, two full years unimpaired growth, stimulated by light annual dressings of plaster, should be given before a crop is attempted, after which an immediate repetition of the same process will, in most cases be required before a sufficient amount of vegetable matter is accumulated to allow of cropping with the best advantage or a due regard to the best economy. After this point is attained, a crop may be taken from the land annually, if a suitable rotation is observed, and a proper part of the growth of each season left for plowing under; that is, if corn is taken, the stalks should be left; if English grain, an after-growth of grass and weeds; or if clover or grass, the rowen should be left, or occasionally an entire year's growth be devoted to the purpose of fertilization; otherwise deterioration takes place, which is inconsistent with good management. This long process may frequently be shortened to advantage by the aid of muck or manure, or both, according to the attendant circumstances of location and means.

Ripe crops are doubtless more efficient for fertilizing than green crops; at least, so Nature, who is said to be "no niggard," has taught us by example, in preparing the earth for the abode of men and animals. The philosophy of this has been given by Dr. Dana, and published in Mr Colman's Third Report of the Agriculture of Massachusetts.

The roller may be regarded as indispensable to the profitable cultivation of sandy or light lands. The free use of a fine harrow or of a heavy bush, will settle the soil in some degree; but at best, those implements are poor substitutes for the roller, as a means of giving that compactness near the surface necessary to preserve for the growing plants the decomposing matter beneath; which as it takes a gaseous form, is by every outlet ever seeking to escape. The amount of fertilizing matter thus lost to the cultivator, by its unarrested, unseen and unceasing process of change from solid to aeriform and departure, is unquestionably very great, however difficult it may be of exact ascertainment; and justly entitles these soils to the title of *evaporating* soils, rather than that of "leeching," or leachy, sometimes given. There are doubtless many farms of this land where the roller is not used, that its judicious application in preventing this great loss of fertilizing matter, would more than outweigh the entire benefit usually derived from the proceeds of the cattle yard, as commonly applied. This may be thought a wild assertion,

but will seem to be the sober truth, when we reflect upon the natural rapid tendency to decay in these soils, which will, and can, continue so long and no longer than while atmospheric air finds free avenues of access to the decaying matter—whether it be the fibre of unremoved roots of plants grown in the soil, or manure applied, or vegetable growth turned under—to displace or dissipate the *gas* which ever envelopes decaying substances, and which somewhat in proportion as it is confined, arrests the further decomposition of remaining matter, and by thus inducing a less rapid rate of decomposition, and being itself taken up by the roots of plants, would benefit the filling out of the crop, were it not so soon set at perfect liberty and given to the atmosphere, by the free ingress and egress of that unsated and untiring agent of dissolution.

The action of ammonia, generated so abundantly by animal manures when buried in the soil, also increases the demand for the roller, by accelerating the work of evaporation; as it not only prepares the crude substances in the manure for rapid dissolution, but seizing upon the inert vegetable matter in the soil, neutralizes its acidity, and in reducing it to a soluble state, effects perhaps as much in days, as unaided spontaneous decomposition does in weeks. The effect of this is seen in the large early growth of stalks, and diminutive starved crop of ears, where corn is planted over a small quantity of uncompounded quick manure, on dry sandy land of medium quality. And so sure is this result, that some farmers will not apply manure for a corn crop on pine plains, thinking it injurious, or productive of stalks only; whereas the injury arising in such cases, is not justly attributable to the *use* of manure, but to its uncombined or unskillful application, and the subsequent mismanagement of the soil. It is said by Dr. Dana, to be this property of ammonia which renders animal manure so valuable in neutralizing the acidity of peat and swamp muck in compost, and preparing those substances for immediate use; and it is doubtless this property which accounts for the long known, but unexplained fact, that tillage land, once put in a highly productive state by the application of farm yard manure, and impoverished, is again rendered fertile with more difficulty than land of the same natural quality and equally unproductive, which has never been treated with manure.

The roller provides against excessive action and evaporation, by closing the pores or interstices in such measure as to hold in partial duress the matter beneath, for the more exclusive and more lasting benefit of the growing plants, and its efficiency in this respect, and in securing the primal growth of clover or grasses for enriching the soil, seem to leave little doubt that it is an indispensable implement for the *profitable* cultivation of light lands, whether exhausted or fresh. Soils sufficiently compact to give suitable protection and mechanical support to young grasses, do not require rolling, except to reset grasses or grain thrown out by frost, or to give a smooth finish after seeding, which can be done with good effect on heavy lands, only when the surface lumps are friable; and lands free from excess of moisture, and sufficiently porous to admit the roots of plants to extend freely, do not require under-draining or subsoil-plowing.

The effect of compressing the surface of light lands, as seen in the grass sward that follows the winding of a seldom used path over an old field, can hardly have escaped the notice of any one, presenting as it frequently does, a verdant stripe amid a lifeless waste.

In discussing thus far, the subject of "renovating exhausted lands," I have, Mr Editor, strayed into other fields almost imperceptibly, and have been led to say much more than I intended to, or perhaps than may be thought worth a place in your journal. And lest I should give still further occasion for the use of your "editorial shears," I will omit the detail and result of some small experiments which I did intend to give as further evidence in the case, or to illustrate some of the principles recited.

Yours, respectfully,
WILLIAM CLARK, Jr.

Northampton, March, 1842.

VILLAGE FARMING.

It is all fudge to suppose that a man must live in the country in order to be a farmer. All experience proves that extensive farming business can be carried on in every village.

For example, every village farmer can keep a *Hen*-ery supplied with 50 or 100 chickens, which will fat easily on his neighbors' gardens.

Every man should have at least two cows and other horned cattle. In the summer they will do well in the woods, and in the winter they pick up a very respectable living from the farmers' wagons as they come into town. We have cows among us that can climb a ladder, or a ship's rigging.

Hogs can be easily kept in great abundance, and the more porkish their disposition, the better. They eat up all the filth in the streets, have great regard for the property of their neighbors, and discourse most eloquent music on a rainy day. We found one in a barrel of flour the other day, but on being reprimanded he ejaculated "*ugh!*" and took his departure. A sow and sixteen pigs are indispensable to every well regulated family.

We recommend every body to attend to these little matters, and they will soon find that village farming is not only profitable, but interesting and delightful.—*Belvidere Apollo.*

☞The editor of the Belvidere Apollo is a shrewd one. He sees how the knowing folks manage. But as his advice omits a few things, we will just hint, that it is profitable to keep a well stocked dove-cot, for in all the spring months the doves will feed without cost upon the neighbors' seed grain, and prevent the plants from coming up too thick. A good large flock of turkeys, also, will, in the autumn, put themselves in fine condition to grace the thanksgiving table, by stuffing themselves in the neighbor's cornfields. We will just hint too, that if you turn out your cows or your horse in April, before the bars are put up in the neighborhood they will find their way into a neighbor's field, and pick up half a living. Such little matters are worth thinking of.

Washington concludes one of his letters to Arthur Young, in the following beautiful language:

"The more I am acquainted with agricultural affairs, the better I am pleased with them; insomuch that I can nowhere find so great satisfaction as in these innocent and useful pursuits. In indulging these feelings, I am led to reflect how much more delightful to an undebauched mind, is the task of making improvements on the earth, than all the vain glory which can be acquired from ravaging it by the most uninterrupted career of conquests."

From the Maine Cultivator.

PLANTING CORN.

Mr Editor—Sir—I wish to communicate to the public, through the medium of your useful paper, a short item in regard to preparing and soaking seed corn before planting. Cover the manure three fourths of an inch when put in the hills, no matter whether new or old manure. I have done it for quite a number of years, and find it well repays me for my trouble. When dropped upon and well covered, the corn comes up more evenly, and is more likely to come and do well, if it should happen to be very dry. Take 4 oz. saltpetre, and 4 oz. copperas to 4 qts. seed—dissolve, soak 24 hours before planting, and roll in plaster. I have tried it, and think it increased my crop ten per cent. I likewise put saltpetre with my blue vitriol, say 8 oz. of saltpetre and 4 oz. of blue vitriol, to one bushel of wheat before sowing, and found it to be a great advantage to my wheat crop. Try it. Perhaps you may hear from me again—if not, you may know I was once a Kennebecker, but now

A Down Easter.

Plymouth, Me., April 2, 1842.

NEW MODE OF GRAFTING.

Mr Downing, of Newburg, has lately practiced with success, a new mode of grafting, the object being to test the quality of fruits raised from seeds, in a shorter period than would be possible by permitting such seedlings to stand until time of bearing.

The method is, to put the top of a shoot from a seedling tree, or a new variety, when it is desirable to procure a specimen immediately, upon the top of a thrifty shoot of a middle-aged fruit-bearing tree; the process being simply to take thrifty shoots, about a quarter of an inch in diameter, and cut them in a slanting manner clear through, so as to detach about four inches of the top from the rest, making the line of the angle about an inch—the stock being cut in the same manner. The backs are to be then carefully united, and bound with yarn, covering the whole with grafting wax to exclude the air. By this mode, fruit may be obtained in a short time, so as to test its value at an early day, the operation being simple with scarcely a fear of failure.—*Selected.*

THE WHEAT CROP.

The appearance of wheat in the Western States, and in Genesee county is spoken of as very fine for this season of the year. The knowledge of wheat having survived the winter well, is always considered important in estimating the crop. When it is not winter-killed and comes forth early in the spring, the berry may ordinarily be expected to fill out before the summer droughts affect it, and before the fly and the weevil have an opportunity to ravage it. A quick and early growth, is perhaps more important to wheat than to almost any other staple.—*Selected.*

The annual income of the Pope of Rome is said to be $1,500,000, and the priests subject to his control and ready to do his bidding, are about a million.

There was a small show of green peas in the Norfolk market on the 10th inst., the first of the season.

NEW ENGLAND FARMER,
AND HORTICULTURAL REGISTER.

BOSTON, WEDNESDAY, APRIL 20, 1842.

INDIAN CORN.

Is it a Profitable Crop for Cultivation?

We often hear the opinion expressed, that Indian corn will not pay the farmer for raising or growing in this vicinity. It is said that when we can buy corn at 65 or 70 cents per bushel, it is better for us to abandon its cultivation. A few farmers in the immediate vicinity of our principal markets, may find it good for them to appropriate their grounds to other crops. But we are not satisfied that the crop yields so small a return for the labor and manure bestowed upon it, as the remarks of many persons would indicate. It is often said that potatoes give a better return.

Let us see how this matter is. Of course we must have reference in such cases to those soils which are suited to either crop, and we must also follow the leadings of our own observations. Take for instance, an acre of land of medium quality in its natural state—let it be land that was fairly manured and tilled when last cultivated, and that has been in grass four or five years, and yielded last season one ton of hay.

The labor of breaking up, harrowing and marking out, will be the same for each—call the cost of it six dollars. Let the manure in either case be equal in worth or cost to five cords of good stable manure; that is, let it equal 30 dollars when put out in the hill or spread on the surface. For seed corn, we will allow (1-2 bushel)—cost 75 cents;—for seed potatoes, (15 bushels, at 40 cts.) the cost will be six dollars. To get the potatoes to the field, drop or plant them out, and cover them, will require nearly one day's work more than to drop and cover the corn. But we will call it only fifty cents more cost. The planting of the corn after the manure is put out, may be $1 50; the potatoes will require 2 dollars worth of labor. The corn should be plowed and hoed three times, at a cost of 6 dollars: the potatoes twice, at a cost of 4 dollars. If the stalks of the corn are topped, bound up, cured and housed, the cost of this may be 3 dollars. At harvesting, a man may be supposed to cut up, get in, and husk out 16 bushels of ears per day; or an acre that gives 40 bushels of shelled corn, in five days—and this at a cost of 5 dollars. We will suppose him to to dig and house 20 bushels of potatoes per day, and his acre giving 150 bushels, will take 7 1-2 days' work, or cost 7 1-2 dollars. The corn stover is worth as much as one ton of good hay—say 15 dollars. The farmer's bushel of corn of his own raising, is worth to him 20 per cent. more than the bushel of Southern corn, which is to be paid for *in cash*, carted home from wharf or store, and which is some 5 or 6 lbs. less in weight. We are not ready to admit that we can buy corn cheaper than we can raise it, if our lands are 8 or 10 miles back from the city.

Now let us see how the account comes out:

Cost of Corn Crop per Acre.

Interest on land,	$6 00
Plowing and fixing the ground,	6 00
Seed,	75
Manure, (when applied)	30 00
Planting,	1 50
Hoeing,	6 00
Cutting and curing top stalks,	3 00
Harvesting,	5 00
	$58 25

Cr.

40 bush. corn, at $1 00,	$40 00
Stover,	15 00
Improvement of land by tillage, and unexpended manure equal to one third of the manure,	10 00
	$65 00

Profit, $6 75.

Cost of Potato Crop.

Interest on land,	$6 00
Plowing and fixing ground,	6 00
Seed,	6 00
Manure,	30 00
Planting,	2 00
Hoeing,	4 00
Harvesting,	7 50
	$61 50

Cr.

By 150 bushels, at 37 1-2 cts.	$56 25
Improvement of land,	10 00
	$66 25

Profit, $4 75.

In these supposed costs and worth of the crops, we have kept near what we suppose to be usual results with the mass of farmers upon pretty good soils. But our own experience has been more in favor of the corn than the above supposition. Where we have tilled, 60 bushels of corn and 20 dollars worth of stover, have been obtained at as little cost as 150 bushels of potatoes.

Two important items are not often sufficiently regarded in relation to these crops, viz: the cost of the seed potatoes, and the worth of the corn stover. We might add, also, the convenience of keeping the corn when once housed, until there was leisure for getting it to market, or until the state of the market was favorable. We have allowed a high price for corn, and for potatoes too, if taken at the farmer's door; but we have also allowed a high price for labor.

It is not our object to oppose the cultivation of the potato, but merely to show that we do not think corn an unprofitable crop—and also to lead our readers to look with some care to the items of expense and profit in the case of each of their important crops.

We are very far from wishing to give a general rule to be followed by all. No such rule is wanted. A. can do best with one crop, and B. with another:—we aim only at recommending to each of them to ascertain which is best *for him*.

WHICH IS THE BEST KIND OF CORN?

Who can answer such a question? That some kinds are more prolific than others, there can be no doubt. But that no person has ascertained that some one kind is superior to all others, we have as little doubt.

The Brown corn has been much extolled for a few years past, as combining in an uncommon degree, the two desirable qualities of early maturity and great productiveness. It doubtless deserves a high reputation. But we doubt whether it has any permanent and distinct characteristics. The specimens which we first saw, were eight rowed and of cinnamon color; but we have since seen some twelve rowed and of a bright yellow color. Many samples of it are a mixture of the two—and are none the less valuable for being so. We have seen a crossed or mixed corn more productive than either of the three varieties out of which it was formed; and we are ready to ask whether the crossing of corns may not as well be recommended as the crossing of stock.

Last season we recommended the Hartwell corn. With many farmers it did well—to others it was not satisfactory. It has a very small stalk, ripens early, is eight rowed, and has a large kernel. These particulars are all desirable, if there can be added to them sufficient length of ear. This corn is of about equal size with the Brown, and of equal value probably.

Our own judgment is in favor of corns, with larger stalk and larger ear, even though late in ripening—especially on warm soils. The chances for a larger crop more than counterbalance the risks from autumnal frosts.

The Red Blaze, the Parker, and several others without a name are more productive with us on warm lands well manured, than the Brown and Hartwell—but they are later in ripening.

John Prince, Esq., of Roxbury, who has been an accurate and useful observer of agricultural operations, brought to our office last autumn, several ears, which appear to be a hybrid of the Tuscarora and the Chinese Tree corn, which are very large, and which, if we correctly retain his statement, were much more prolific than either of the varieties out of which the cross was formed. We would suggest the propriety of planting several varieties, which ripen at about the same time, together.

We shall not answer our own question: we do not know which is *best*. If yours has *done well* in years past, stick to it. We have tried *many* kinds, and not gained much by it.

THE SEASON—TREES, &c.

Though the season was unusually mild during much of the winter, and the buds on our forest and fruit trees began to swell unusually early in the spring, yet they will not open much earlier than usual. The severe frosts we have had since the buds started, do not seem to have done injury to any trees that have come within our notice. The peach trees in and immediately around the city, are now red with full and fair buds, which a warm day or two will bring open. Trees generally look well. Grass has survived the winter well, excepting that which was sown last season; this latter has in many spots been thrown out and destroyed by the many freezings and thawings of the winter. Winter grain that was sowed early and made a fair growth in the autumn, promises well, but that which was sowed late, especially on poor lands, has been destroyed. Such are the facts within the extent of our personal observations.

The season now is wet and rather cold. But there is nothing unpromising in the general appearances of the trees, the grass, the grains, or in the state of the weather.

RENOVATION OF EXHAUSTED SOILS.

We would ask the attention of all our readers who are desirous to renovate light lands, to Mr Clark's communication, which fills the greater part of our paper. The subject is there well treated. As Dr. Dana is frequently referred to, possibly some may wonder that Mr Clark makes no reference to the Muck Manual. To prevent any such wonder, we will state that the article now inserted, has been on hand for several weeks, and was written before the publication of Dr. Dana's book.

MASS. HORTICULTURAL SOCIETY.

Saturday, April 16, 1842.

The following communication was received from Wm. Kenrick, Esq.:—

To the Committee on Fruits:

GENTLEMEN—I send you a fruit—an Apple—believed to be a native,—called *Masters' Apple*—supposed to have originated on the farm of Mr Masters, Greenland, N. H. Bears constantly—keeps well.

Respectfully, your humble serv't,

Newton, April 16. WM. KENRICK.

The above described fruit was found past its prime, but gave evidence of being a first rate apple. Should be obliged by receiving perfect specimens another year.

For the Committee, BENJ. V. FRENCH.

THERMOMETRICAL.

Reported for the New England Farmer.

Range of the Thermometer at the Garden of the proprietors of the New England Farmer, Brighton, Mass. in a shaded Northerly exposure, for the week ending April 17.

April, 1842.		6, A.M.	12, M.	6, P.M.	Wind.
Monday,	11	42	62	55	N. E.
Tuesday,	12	37	49	42	W.
Wednesday,	13	32	46	40	S. E.
Thursday,	14	38	39	38	E.
Friday,	15	33	57	38	W.
Saturday,	16	35	55	39	E.
Sunday,	17	37	53	36	E.

BRIGHTON MARKET.—MONDAY, April 18, 1842.

Reported for the New England Farmer.

At Market 200 Beef Cattle, 12 pairs Working oxen, 15 Cows and Calves, 200 Sheep, and 1550 Swine.

PRICES.—*Beef Cattle.* Prices generally advanced about 25cts. pr hundred for a like quality. We quote a very small number of extra cattle at $5 50. First quality, $6 00 a 6 25. Second quality, $5 50 a 6 00. Third quality, $4 75 a 5 25.

Working Oxen.—No sales were noticed.

Cows and Calves. Sales 20, 22, 28, and $35.

Sheep.—Lots, 3 25, 3 75, and $4 50.

Swine.—Lots to peddle, from 3 1-2 a 3 3-4 for sows, and 4 1-2 a 4 3-4 for barrows. A lot of old Barrows at something over 4cts. At retail, from 4 to 6.

WHOLESALE PRICES CURRENT.

Corrected with great care, weekly.

SEEDS. Herds Grass, $2 62 to 3 00 per bushel. Red Top, 45 to 50 cents. Clover—Northern, 11 to 12c.—Southern, 10 a 11 c. Flax Seed, $1 50 to 1 85 bu. Lucerne, 25 c, per lb. Canary Seed, $3 50 a 4 00 per bushel.

GRAIN. Sales of yellow flat corn 66, 66 1-2, and 67c. per bushel; northern round, 67 1-2c. Oats, few in market, and in better demand; sales northern Rye, 70c per bushel.

Corn—Northern, bushel — to — —do. Round Yellow — a — —do. Southern Flat Yellow 66 a 67 —White do. 58 a 59 —Barley — a — —Rye, Northern, 70 a — —Oats, Southern 45 a 47—Northern do. 48 to 50—Beans, per bushel 75 a 1 50.

FLOUR. Sales consist of Fredericksburg at $5 94, cash, and $6 12 on 4 mos; Baltimore wharf, garlicky, $5 62, cash, and do City Mills, $5 87, on 4 mos; Howard street, $6 cash, and $6 12 a 6 18 3-4, on short credit; Genesee, $6 62 1-2, and fancy, $6 69 cash; 400 bbls Ohio, $6 18 3-4, and 600 do. do. to arrive, $6 a 6 12 1-2 per bbl.

Baltimore, Howard Street, 4 mos. cr. $6 12 a — —do. wharf, $5 87 a — do. free of garlic, $6 12 a — —Philadelphia do. 4 mos. $6 12 a — —Fredericksburg, lowl'd 4 mos. $6 00 a 6 12 —Alexandria, wharf mountain,—$5 87 a — —Georgetown, $6 12 a 6 25—Richmond Canal, $6 12 a 6 25—do. City, $7 00—Petersburgh, City Mills, $6 00 a 6 12 —do. Country $5 87 a 6 00—Genesee, common, cash, $6 62 a — — do fancy brands $6 69 a 6 75— Ohio, via Canal, $6 25 a 6 37—Indian Meal in bbls., $3 00 a 3 25.

PROVISIONS. Sales by auction, 400 bbls Western Clear Pork, 10 75 a $11 37; 412 do Mess, 8 25 a $8 50; 29 do. do. ordinary, $7 37; 390 do Prime, $6 12; 37 do Clear, old, $9 75; 60 do Mess do 7 75 a $7 87; 121 do Prime, $4 a 4 12;

Beef—Mess, 4 mo. new bbl. $9 00 a 9 50—Navy—$8 00 a — —No. 1, $7 25 a 7 50—do Prime $4 75 a 5 00—Pork—Extra clear, 4 mo. bbl. $12 a — —do Clear $11 a — —do Mess $8 25 a 8 50 —do Prime $6 25 a 6 50—do Mess from other States 8 25 a 8 50.

WOOL. Duty. The value whereof at the place of exportation shall not exceed 8 cts. per pound, free. All whereof the value exceeds 8 cts. per pound, 32 per ct. ad. val. and 4 cts. per pound.

The sales of this article have been during the past week, to a very limited extent, and prices are still unsettled.

Prime or Saxony Fleeces, washed, lb. 47 a 50 c.—American full blood, do 43 a 45—Do. 3-4 do 38 a 40—Do. 1-2 do 33 a 35—1-4 and common do 29 a 30 — Smyrna Sheep, washed, 20 a 25—Do. unwashed, 10 a 13—Bengasi do 8 a 10—Saxony, clean, — Buenos Ayres unpicked, 7 a 10—do. do. picked, 12 a 16—Superfine Northern pulled lamb 37 a 40—No. 1 do. do. do. 34 a 36—No. 2 do do do 24 a 26—No. 3 do do do 15 a 20.

HOPS. The market continues the same for prices as reported last week.

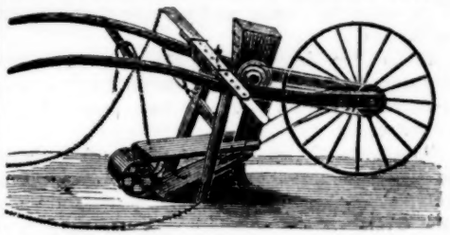
1st sort, Mass. 1841 per lb 8 a 10— —2d do do do 6 a 8.

HAY, per ton, $18 to 22—Eastern Screwed $13 to 18

CHEESE—Shipping and 4 meal, 4 to 6c.—New 5 to8.

EGGS, 12 a 16.

WILLIS'S LATEST IMPROVED SEED SOWER.



In using this machine, the farmer may be certain that his seed is put into the ground, and at the same time in the best possible manner. There has been a great difficulty in machines for sowing garden seeds; they are very apt to clog up, and the farmer might go over an acre of land and not sow a single seed; but not so with this; it is so constructed that it cannot possibly clog. In using this sower, the farmer can save one half of his seed, and do the work at less than one quarter the expense of the common way of sowing, and have it done in a much better manner; it opens the furrow, drops the seed, covers it over and rolls them down. It will sow any kind of Garden Seeds; say Ruta Baga, Mangel Wurtzel, Turnips, Carrots, Beets, Parsnips, Onions, &c. For sale at the New England Agricultural Warehouse and Seed Store, Nos. 51 and 52 North Market street, by JOSEPH BRECK & CO.

April 20

HOWARD'S IMPROVED EASY DRAUGHT PLOUGH.

Great improvements have been made the past year in the form and workmanship of these Ploughs; the mould board has been so formed as to *lay the furrow completely over, turning in every particle of grass or stubble, and leaving the ground in the best possible manner.* The length of the mould board has been very much increased, so that the Plough works with the greatest ease, both with respect to the holding and the team. The Committee at the late trial of Ploughs at Worcester, say,

"Should our opinion be asked as to which of the Ploughs we should prefer for use on a farm, we might perhaps say to the inquirer, if your land is mostly light and easy to work, try Prouty & Mears, but if your *land is heavy, hard orrocky,* BEGIN WITH MR. HOWARD'S."

At the above mentioned trial the Howard Plough *did more work, with the same power of team, than any other plough exhibited.* No other turned more than twentyseven and one half inches, to the 112 lbs. draught, while the *Howard Plough turned twentynine and one half inches, to the same power of team!* All acknowledge that Howard's Ploughs are much the strongest and most substantially made.

There has been quite an improvement made on the shoe, or land side of this Plough, which can be renewed without having to furnish a new landside; this shoe likewise secures the mould board and landside together, and strengthens the Plough very much.

The price of the Ploughs is from $6 to $15. A Plough, sufficient for breaking up with four cattle, will cost about $10 50, and with cutter $1, with wheel and cutter, $2 50 extra.

The above Ploughs are for sale, wholesale and retail, at the New England Agricultural Warehouse and Seed Store, Nos. 51 & 52 North Market Street, by

JOSEPH BRECK & CO.

April 20

FRUIT TREES.

For sale at the Pomological Garden, Salem, Mass., a choice collection of Apple, Pear, Plum, Cherry, and Peach Trees. Also, a great variety of Scions cut from fruit bearing Trees. Apply by mail to the Superintendant.

ROBERT MANNING.

Salem, April 6, 1842. 2w

PEAR AND PLUM STOCKS.

For sale by SAMUEL POND, Cambridgeport. Also, Asparagus roots. April 20.

FRUIT, ORNAMENTAL TREES &c.

NURSERY OF WILLIAM KENRICK,

Of *Peach, Pear, Plum and Cherry Trees,* a collection unrivalled in any former year, for extensive numbers of fine trees, of new and finest kinds. Large additions of new, valuable, or beautiful, are just received from Europe.

Gooseberries of first quality, Apples, Quinces, Grape Vines, Raspberries, Currents, Strawberries, &c. The new abridged and descriptive Catalogue for 1842, will be sent to all who apply.

Ornamental Trees and Shrubs, Honeysuckles, &c. Splendid varieties of double yellow Harrison and other Roses—of Tree Pæonies, of Herbaceous Pæonies, and other flowering Plants—of double Dahlias, &c., Rhubarb of first rate newest kinds, Cockspur, Thorns, &c.

All orders addressed to the subscriber, will be promptly attended to, and Trees when so ordered, will be securely packed in mats and moss for safe transport to all distant places by land or sea, and delivered in the city free of charge, for transportation by the wagon which is sent thither daily, or orders may be left at the stand, at No. 44 Congress street, Boston.

WILLIAM KENRICK

Nonantum Hill, Newton.

March 9, eptl2thJune

GARDEN AND FIELD SEEDS.

JOSEPH BRECK & CO. have received their full supply of Garden and Field Seeds, which they warrant to be pure and fresh, as follows:

Early Cedo Nulli Peas.	Early Horn do.
" Warwick do.	Mangel Wurtzel Beet.
" Dwarf do.	Sugar do.
" Washington do.	Long Red do.
" Frame do.	Early Turnip do.
Blue Imperial do.	Ruta Baga.
Marrowfat, &c.	Turnips in great variety.
White Altringham Carrot.	Early and Late Beans of sorts.
Long Orange do.	

SEED BARLEY, AND OATS.

For sale at No. 52 North Market st., a prime lot of Seed Barley. Also English Oats. J. BRECK & CO.

Boston, April 6.

APPLE STOCKS.

The subscribers offer for sale 10,000 fine Apple Stocks two years old.

JOSEPH BRECK & CO. No. 51 North Market st. Boston. April 6.

FRUIT TREES.

A prime lot of large size Apple, Pear, and Plum trees, for sale by J. BRECK & CO., No. 52 North Market st.

March 30, 1842.

GRASS SEEDS.

Northern and Southern Clover Seed—White Dutch do. —Lucerne—Herds Grass—Red Top—Orchard Grass—Fowl Meadow Grass—Oat Grass, &c. Millet, Rape, Canary and Hemp Seed. Every variety of seed for Agricultural or Horticultural purposes, may be obtained at the Agricultural Establishment, No. 52 North Market street, Boston.

March 9.

GOOSEBERRY BUSHES.

JOSEPH BRECK & CO., have received a prime lot of Gooseberry Bushes from Scotland of the finest varieties. For sale at $2 37 per dozen, of different sorts.

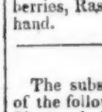
Boston, April 13.

MUCK MANUAL.

For sale by JOSEPH BRECK & CO., The Muck Manual for Farmers. By Dr S. L. DANA; price $1.

Boston, April 13.

CAMBRIDGEPORT NURSERY.



SAMUEL POND, Nurseryman, Columbia street, Cambridgeport, Mass. Has for sale a choice assortment of FRUIT TREES, SHRUBS, ROOTS, and VINES, among them are the best varieties of Apple, Pear, Plum, Cherry, Peach, Apricot, Grapevines, Asparagus, Rhubarb, Pear stocks, Apple do., Plum do., Currants, Gooseberries, Raspberries, &c. Trees of an extra size always on hand. March 23.

APPLE SCIONS.

The subscriber can supply very large and thrifty scions of the following kinds, Baldwin, Greening, River, Porter, Nonesuch, Pearmain, Sweetings, &c. &c. Also, a few of the choice kinds of *Pears* and *Plums.* Orders left at J. BRECK & Co., or at the counting room of the subscriber, 85 Washington st., Boston, or sent by mail, to Brighton, will be promptly attended to. JAMES L. L. F. WARREN.

April 6.

MISCELLANEOUS.

THE BUCKET WHICH HUNG IN THE WELL.

BY S. WOODWORTH.

How dear to my heart are the days of my childhood,
When fond recollection presents to my view
The orchard, the meadow, the deep-tangled wild wood,
And ev'ry lov'd spot which my infancy knew;
The wide spreading pond, and the mill which stood near it;
The bridge and the rock where the cataract fell,
The cot of my father, the dairy-house nigh it,
And e'en the rude bucket that hung on the well—
The old oaken bucket,
The iron bound bucket,
The moss covered bucket that hung on the well.

That moss covered bucket I hail as a treasure;
For often at noon, when return'd from the field,
I found it the source of an exquisite pleasure,
The purest and sweetest that nature could yield.
How ardent I seized, with hands that were glowing,
And quick to the white pebbled bottom it fell;
Then soon, with the emblem of truth overflowing,
And dripping with coolness, it rose from the well.
The old oaken bucket,
The iron bound bucket,
The moss covered bucket arose from the well.

How sweet from the green mossy rim to receive it,
As pois'd on the curb it inclined to my lips;
Not a full flowing goblet could tempt me to leave it,
Tho' filled with the nectar that Jupiter sips.
And now, far removed from that situation,
The tear of regret will intrusively swell,
As fancy reverts to my father's plantation,
And sighs for the bucket which hung in the well.
The old oaken bucket,
The iron bound bucket,
The moss covered bucket that hung on the well.

From the National Intelligencer.

REMEDY FOR RHEUMATISM.

Messrs. Editors—I crave at your hands an insertion of the enclosed receipts for *rheumatic* and *pseudo-rheumatic* pains. I have known them to effect cures, after proper preparation, when all other means have failed. They have been a long time in the hands of an empiric, and I have gotten possession of them by the death of the original holder. I deem it my professional duty to have them published, and for this purpose need not appeal to your well known humanity. I append my name, that I may give them its feeble authority, and enable sufferers to have them more fully explained. Very respectfully,

THOMAS G. CLINTON, M. D.

Washington City, March, 1842.

Receipt for Making the Ptisan of Calas.

Take 12 ounces of Sarsaparilla, 2 drachms of Calomel, 1 oz. of Senna, 6 drachms of Coriander seed, 1-2 drachm alum. Take the sarsaparilla and calomel, wrapping the latter in a linen towel, and put them in a suitable bell-metal or copper pot. Throw in five bottles of water, and mark the height; one fourth higher make another mark, and then add ten bottles more of water. Boil these down to the higher mark, and then put in, wrapped in another towel, the three remaining drugs. Boil all down to the lower mark; take them then from off the fire, cool, strain, and put the decoction in five bottles.

Replace the drugs in the pot, with ten bottles of water; boil down to the lower mark; cool, strain, &c. as above, and you have prepared the second ptisan.

Directions—Take a bottle of the first ptisan during a day; that is, morning, before dinner, and evening. Take also, at pleasure, during the same time, a bottle of the second ptisan. If they operate too powerfully, cease taking No. 2. If in 30 days you are not cured, discontinue the ptisans for some time, and then recommence for 30 days more, and so on.

Eat no salt, crude or unripe food, spice, &c.; drink no strong liquors.

A Similar Receipt.

Take of Sarsaparilla 12 ounces, Sassafras 6 drachms, Guiacum 6 grains, Calomel 2 drachms, Coriander 6 drachms, Alum 30 grains, Senna, 2 drachms. Boil the three first drugs in fifteen bottles of water, down to ten; put in the other four, and boil down altogether to five bottles.

Remember to wrap the calomel and alum, and suspend them so as not to touch the pot.

FOR BURNS.—The safest and best application to either a severe burn or scald, is soft cotton. In many cases it is applied perfectly dry to the part, and in others it is wetted on the side next the sore, with a mixture of lime-water and linseed oil. A rag wetted with some substance may be used where cotton cannot be had, but cotton is best, and no house should be without a quantity of it.

A mess of scraped potato is excellent to be bound on the part burnt, as soon as possible.

AGRICULTURAL IMPLEMENTS, &c

The Proprietors of the New England Agricultural Warehouse and Seed Store No. 51 and 52 North Market street, would inform their customers and the public generally that they have on hand the most extensive assortment of Agricultural and Horticultural Tools to be found in the United States. Part of which are the following:

1000 Howard's Patent Cast Iron Ploughs.
300 Common do. do.
200 Cultivators.
100 Greene's Straw Cutters.
50 Willis' do. do.
100 Common do. do.
100 Willis' Patent Corn Shellers.
50 Common do do.
200 Willis' Seed Sowers.
50 " Vegetable Cutters
50 Common do. do.
200 Hand Corn Mills.
200 Grain Cradles.
100 Ox Yokes.
1500 Doz. Scythe Stones.
3000 " Austin's Rifles.
100 doz. Cast Steel Shovels.
150 " Common do.
100 " Spades.
500 " Grass Scythes.
300 " Patent Snaiths.
200 " Common do.
500 " Hay Rakes.
200 " Garden do.
200 " Manure Forks.
300 " Hay do.
500 Pair Trace Chains.
100 " Truck do.
100 Draft do.
500 Tie up do.
50 doz. Halter do.
1000 yards Fence do.
25 Grind Stones on rollers.

March 17.

POUDRETTE.

500 Barrels Poudrette may be had on application to the subscriber, at $2 per barrel of *four* bushels each—delivered on board of vessel in this city. Orders by mail, enclosing the money will be promptly attended to, if received soon by D. K. MINOR, Agent, 120 Nassau st., New York.
Jan, 5, 1842.

SUN DIALS.

Just received a few of Sheldon & Moore's, Sun Dials, a very neat and useful article for the purpose of giving the time of day in the garden or field. Price 75 cents. For sale by J. BRECK & CO., No 51 and 52 North Market St.
Sept 1.

GREEN'S PATENT STRAW CUTTER.

JOSEPH BRECK & CO. at the New England Agricultural Warehouse and Seed Store Nos. 51 and 52 North Market Street, have for sale, Green's Patent Straw, Hay and Stalk Cutter, operating on a mechanical principle not before applied to any implement for this purpose. The most prominent effects of this application, and some of the consequent peculiarities of the machine are:

1. So great a reduction of the quantum of power requisite to use it, that the strength of a half grown boy is sufficient to work it efficiently.
2. With even this moderate power, it easily cuts two bushels a minute, which is full twice as fast as has been claimed by any other machine even when worked by horse or steam power.
3. The knives, owing to the peculiar manner in which they cut, require sharpening less often than those of any other straw cutter.
4. The machine is simple in its construction, made and put together very strongly. It is therefore not so liable as the complicated machines in general use to get out of order.

SEEDS FOR HOT BEDS.

The subscribers offer for sale a great variety of Vegetable Seeds desirable for the Hot bed, as follows,

Nonpariel Cabbage.
Early Hope do.
Early Synot's Cucumber.
Fine Long Green do.
Egg Plant.
Early Cauliflower.
" Broccoli, of sorts.
Celery, superior sorts.
Sweet Marjorum.

For sale by JOSEPH BRECK & CO., at the New England Agricultural Warehouse, No 51 and 52 North Market Street, Boston. March 9.

FLOWER SEEDS.

JOSEPH BRECK & CO., Nos. 51 and 52 North Market street, offer for sale their usual variety of Flower Seeds, comprising all that are desirable for cultivation.
Boston, March 9th, 1842.

FOR SALE,

A few pairs of Mackay and Berkshire PIGS, from 2 to 4 months old. E. PHINNEY.
Lexington, Feb. 9.

TYE UP CHAINS.

Just received by 500 Chains for tyeing up Cattle.
These chains, introduced by E. H. DERBY, Esq. of Salem, and Col. JACQUES, for the purpose of securing cattle to the stall, are found to be the safest and most convenient mode of fastening cows and oxen to the stanchion.

DRAFT AND TRACE CHAINS.

400 pair Trace Chains, suitable for Ploughing.
200 " Truck and leading Chains.
200 " Draft Chains. For sale by J. BRECK & CO., No. 52 North Market st.

FENCE CHAINS.

Just received from England, 10,000 feet Chains, suitable for Fences or other purposes. For sale by J. BRECK & CO., No. 52 North Market st. April 21

SITUATION WANTED

AS GARDNER—by one that has served a regular apprenticeship in Europe, and has had seven years' experience in this country. The best of reference given. Address J. D. at this office. March 9.

NEW ENGLAND FARMER.

A WEEKLY PAPER.

Terms, $2 per year *in advance*, or $2 50 if not paid within thirty days.

N. B.—Postmasters are permitted by law to frank all subscriptions and remittances for newspapers, without expense to subscribers.

TUTTLE AND DENNETT, PRINTERS.